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Benefits and Obstacles to Purchasing Food From Local Growers and Producers

Mary B. Gregoire
Iowa State University

Catherine H. Strohbehn
Iowa State University, cstrohbe@iastate.edu

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Abstract
Oftentimes, those who are responsible for purchasing food for school foodservice programs have a variety of vendors from whom they choose to purchase. One buying option that is receiving increased support from the U.S. Department of Agriculture (USDA) is the purchase of foods from local growers (those who grow food items on their farm and sell directly to consumers) and producers (those who produce a food item, such as pasta or ground beef, from locally grown or raised foods). Data for this study were collected from individuals responsible for managing school foodservice operations in four Midwestern states to determine current purchasing practices and identify benefits and obstacles to purchasing food from local growers or producers. Results indicated that approximately one-third of the managers had purchased from local growers or producers. Primary benefits cited were: good public relations; aiding the local economy; ability to purchase smaller quantities and fresher food; knowing product sources; and food safety. The year-round availability of food items, as well as the ability to obtain an adequate food supply and reliable food quantity, were perceived as the greatest obstacles.

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Mary B. Gregoire, PhD, RD; and Catherine Strohbehn, PhD, RD

ABSTRACT

Oftentimes, those who are responsible for purchasing food for school foodservice programs have a variety of vendors from whom they choose to purchase. One buying option that is receiving increased support from the U.S. Department of Agriculture (USDA) is the purchase of foods from local growers (those who grow food items on their farm and sell directly to consumers) and producers (those who produce a food item, such as pasta or ground beef, from locally grown or raised foods).

Data for this study were collected from individuals responsible for managing school foodservice operations in four Midwestern states to determine current purchasing practices and identify benefits and obstacles to purchasing food from local growers or producers. Results indicated that approximately one-third of the managers had purchased from local growers or producers. Primary benefits cited were: good public relations; aiding the local economy; ability to purchase smaller quantities and fresher food; knowing product sources; and food safety. The year-round availability of food items, as well as the ability to obtain an adequate food supply and reliable food quantity, were perceived as the greatest obstacles.

INTRODUCTION

School foodservice directors are responsible for effective management of the financial resources for their operation. Purchasing food for the program is a major use of these financial resources. Sneed and White (1993) reported that competencies related to food purchasing were important components of the job of school foodservice manager. Their results indicated that school foodservice managers performed activities related to ordering food on a weekly basis.

A food-buying option that is receiving increased emphasis is the purchase of food items from local growers and producers. This effort has received strong support from the U.S. Department of Agriculture (USDA) as evidenced by such activities as the Small Farms/School Meals Initiative. This Initiative encourages local growers to sell food products to schools and urges schools to buy food from local growers. Goals of the effort are to improve the economic stability of small farmers and the long-term health of school children (USDA, 2000).

USDA currently estimates that almost 1.9 million farms in the United States, or 94 percent of all farms, are small or limited-resource farms that provide an average net income of less than $25,000. The potential of these farms to generate income has been restricted in part by depressed prices for many bulk agricultural commodities and recent reductions in traditional crop subsidies (Tropp & Olowolayemo, 2000).

Development of new markets for agricultural producers is one strategy to increase profitability and ensure survival of small- to medium-size farm operations (Lucht, 1999). Direct-farm marketing is an effort to shorten the chain of intermediaries, such as wholesalers and brokers, between producers and consumers. Advocates of direct-farm marketing argue that the food is fresher and of higher quality, costs less with higher returns to the grower or producer, and helps the local economy since revenue is kept within the geographic area (Cottingham, Hovland, Lenon, Roper, & Techtmann, 2000). The increase in the number of farmer's markets and community-supported agriculture groups indicates that these direct marketing efforts are being successful in connecting food growers and producers with consumers at retail levels (Gilman, 1999).

Evidence of successful direct marketing to local hotel, restaurant and institutional (HRI) markets is less clear. The HRI market is complex, with several sectors within the industry, such as quick-service to up-scale restaurants and onsite foodservice in healthcare, schools, and business. Factors that influence vendor selection include:

- menu;
- number of patrons served;
- clientele;
- geographic location;
- purchasing and payment policies;
- form of packaging, convenience; and
- compliance with state and federal government regulations for food safety.

Although close to one-half of the American food dollar is spent on food prepared away from home (National Restaurant Association, 2000), perceptions of HRI food buyers in any segment of the industry with regard to local food sourcing have not been examined in empirical studies. What has been reported in the literature about use of local purchasing by HRI operations, however, has focused on specific geographic locations, foods, or establishments and has primarily represented the perspective of the grower.

A review of successful farm to school connections was featured in the last issue of *The Journal of Child Nutrition & Management* (Strohbehn & Gregoire, 2001). The Community Food Security Coalition's publication, *Healthy Farms, Healthy Kids* (Azuma & Fisher, 2001), argued the need for improved nutritional offerings in school meal programs, and described several school district efforts to offer salad bar meals prepared from locally grown produce. Both of these publications identify several farm-to-school programs in many states, yet there is no published research compiling types of food items, cost/benefit, or other important foodservice operational information. Findings from case studies are helpful in understanding particular benefits and obstacles to purchasing foods from local sources; however, no empirical evidence to date has identified perceptions held by school foodservice buyers.

This article presents findings from a questionnaire that was sent to school foodservice directors, which was designed to identify benefits and obstacles to purchasing foods from local growers (those who grow food items on their farm and sell directly to consumers) and producers (those who produce a food item, such as pasta or ground beef, from locally grown or raised foods).

Information presented in this article will assist in the development of strategies and procedures to increase purchases of locally grown and produced foods.

METHODOLOGY

In Fall 1999 and Spring 2000, semi-structured interviews were conducted with individuals responsible for foodservice operations in seven school districts. School districts were public and private, varied in size from less than 400 students to greater than 10,000 students, and were located in communities ranging in size from 800 to 200,000 citizens. Some of the interviewees were full-time foodservice administrators, while others had food production and administrative responsibilities. Information gathered in the interviews was used to develop a questionnaire for this research study.

The questionnaire consisted of five sections. In Section 1, respondents were asked to rate the degree of benefit for each of 12 factors related to purchasing foods locally using a 5-point Likert-type scale (1=No benefit to 5=Strong benefit). In Section 2, a list of 16 possible obstacles was presented, and respondents were asked to rate the degree to which each item presented an obstacle to purchasing foods locally (1=No obstacle to 5=High obstacle). Information about current purchasing practices was requested in Section 3. Demographic information about the person purchasing the food, the school district, and the community was requested in Section 4. In Section 5, usage and frequency of delivery information were requested for several specific food items that potentially could be purchased locally. (These data were collected to assist with determining a potential market for local growers and producers and will not be discussed in this article.)

Five school foodservice directors in central Iowa were asked to complete the questionnaire and evaluate it for content validity, clarity of items, and understandability of directions. No statistical testing of data collected in this review phase was done. The directors did not recommend any changes to the questionnaire.

The sample for the study included individuals responsible for the school foodservice operation from four Midwestern states: Iowa, Kansas, Nebraska, and Minnesota (N=1,244). These states were selected because a large portion of their economy is from agriculture and related businesses and the researchers were most interested in results from this region of the country. Mailing labels for all school districts in Kansas, Nebraska, and Minnesota were purchased from a database company. The labels were addressed to "Foodservice Director," and included the school district's name and address. Mailing labels for a random sample of school districts in Iowa were obtained from the Iowa Bureau of Food and Nutrition and included the name of the individual identified in their records as responsible for the foodservice operation in that district.

Questionnaires were mailed in September 2000 with a request for participation and a postage-paid, self-addressed, return envelope. Follow-up postcards were sent to non-respondents in October. When requested, a second survey and postage-paid, self-addressed, return envelope were sent.

SPSS (version 9.0, 2000) was used for all data analyses. Frequencies, means, and standard deviations were calculated. Coefficient alpha was calculated to determine a reliability estimate for the benefits and obstacles items. Analysis of variance was used to compare tendency toward local purchasing based on size of community. Analysis of variance also was used to compare mean ratings of perceived benefits and obstacles based on size of the community.

RESULTS AND DISCUSSION

A 19 percent response rate was achieved, with 237 questionnaires returned. Respondents' school foodservice operations were located in communities ranging in size from less than 1,000 people to greater than 10,000 inhabitants; 51% were in communities of 1,000-10,000 people. Most respondents were working in school foodservice operations in which 100-500 meals were served for breakfast (41.8%) and 500 or more meals were served for lunch (56.1%).

Information about the purchasing practices in these school foodservice operations is included in **Table 1**. Results indicated that the director (42.8%) or kitchen manager (33.8%) was the person who most often purchased the food. Many of the food buyers (54.3%) had been purchasing food for more than 10 years. Nearly half (45.8%) of the school foodservice operations in this study used five or more vendors for their food purchases. Food orders were most commonly placed either in person with a sales representative who came to the school foodservice operation (88.6%) or by telephone (51.9%). Fax machines (14.8%) and computers (11.8%) were not used very often. Prime vendors (one vendor with whom the majority of food items are purchased each week) were used in many (67.1%) of the school foodservice operations, as were purchasing cooperatives (several schools organized as one purchasing entity to increase volume purchased and obtain lower pricing) (45.9%).

Table 1. School foodservice purchasing practices

Practices	N	%
Person purchasing food		
Director	99	42.8
Kitchen Manager	78	33.8
Head Cook	42	18.2
Other	12	5.2
Length of time person purchasing food has been in position		
Less than 5 years	56	24.8
5-9 years	47	20.8
10-15 years	68	30.1
More than 15 years	55	24.3
Total number of current vendors		
1-2 vendors	32	14.1
3 vendors	52	22.9
4 vendors	39	17.2
5 or more vendors	104	45.8
Method for placing food orders[1]		
In person	210	88.6
By telephone	123	51.9
By fax	35	14.8
By computer	28	11.8
Current purchasing practices[1]		
Use prime vendor	159	67.1
Participate in food purchasing cooperative	106	45.9
Purchase from local growers	80	34.8

[1]Respondents could choose multiple responses, thus numbers may total more than 237 and percentages do not total 100

Of particular interest was whether purchase of locally grown and/or produced items was occurring in school foodservice operations. Approximately one third (34.8%) of participants in this study indicated that they had purchased food products from local growers and/or producers. Fresh produce items were the products most commonly purchased locally.

Analysis of variance was used to examine whether the tendency to purchase locally grown and produced food differed based on the size of community in which the school foodservice operation was located. No significant differences were found.

Benefits to Purchasing Locally Grown/Produced Foods

Participants were asked to rate 12 potential benefits to purchasing locally grown or produced foods for their school foodservice operation. Results are shown in **Table 2**. Good public relations and aiding the local economy received the highest ratings, which indicated that both were perceived as strong benefits that resulted from purchasing locally. The ability to purchase smaller

quantities and fresher food, knowing the product sources, and food safety also were perceived as benefits. The coefficient alpha reliability estimate for the benefits items was 0.91.

Table 2. Perceived benefits for school foodservice operations from purchasing local foods

Benefits[1]	M[2]	±	SD
Good public relations	4.3		1.0
Aid to local economy	4.2		1.0
Purchase small quantities*	4.0		1.2
Fresher food*	4.0		1.1
Know product sources	3.8		1.2
Lower transportation costs	3.7		1.3
Higher quality food	3.6		1.3
Safer food*	3.3		1.3
Less expensive food	3.3		1.3
Less use of pesticides	3.1		1.3
Special variety of produce	2.7		1.3
Greater variety of food	2.6		1.2

[1]Respondents were asked to indicate the degree to which each of the items listed were perceived to be a benefit to purchasing from local growers and producers

[2]5 point scale, using 1=No benefit to 5=Strong benefit

**p<0.05; ANOVA comparison of means based on community size, means from communities of <1000 significantly higher than others*

N=237

These findings are consistent with previously published articles. Azuma and Fisher (2001) reported that a primary reason for local purchasing was to support the local economy and family farms. Jolly (1999), in his presentation at the USDA agricultural outlook forum, shared data collected in several states that showed quality of food products, support of local farmers, and food safety concerns as primary reasons consumers purchased locally grown food products.

Analysis of variance was used to compare the mean ratings based on the size of the community in which the school foodservice operation was located. Participants from school foodservice operations in communities of less than 1,000 people rated the following three items as "significantly stronger benefits": ability to purchase smaller quantities of food; availability of fresher food; and availability of safer food. These results may reflect a stronger link with agriculture in the more rural communities in the Midwest.

Obstacles to Purchasing Locally Grown/Produced Foods

Participants also were asked to rate 16 potential obstacles to purchasing locally grown and produced foods for their school foodservice operation. Results are shown in **Table 3**. The lack of availability of foods year-round and the ability to obtain an adequate food supply and quantity were perceived as the greatest obstacles. Although no items listed on the questionnaire were rated as being "High Obstacles" (i.e. mean > 4.0 on 5.0 scale), all were perceived as being at least somewhat of an obstacle to local purchasing (means ranged from 2.5 to 3.9). The

coefficient alpha reliability estimate for the obstacles items was 0.92. No differences in ratings were found based on the size of the community.

Table 3. Perceived obstacles for school foodservice operations to purchasing local foods

Obstacles[1]	M[2]	±	SD
Lack of year-round food availability	3.9		1.3
Ability to obtain adequate food supply	3.5		1.3
Reliable food quantity	3.4		1.3
Local and state regulations	3.3		1.4
Dealing with more vendors	3.3		1.4
Product cost	3.1		1.3
Knowledge about local growers/producers	3.0		1.4
Safety issues	3.0		1.4
Order methods	3.0		1.4
Preparation labor time	2.9		1.4
On-time delivery	2.9		1.4
Clean and sturdy packaging	2.9		1.3
Consistent package size	2.9		1.3
Getting approval for new suppliers	2.7		1.4
Personal preference to work with current vendors	2.7		1.4
Payment procedures	2.5		1.4

[1]Respondents were asked to indicate the degree to which each of the items listed were perceived to be an obstacle to purchasing from local growers and producers

[2]5 point scale, using 1=No obstacle to 5=High obstacle

N=237

These results are consistent with those reported by others. An Iowa State University Extension publication (Gregoire et al., 2000) suggested that seasonality and availability of products and reliability of volume to meet needs of schools as two primary concerns of school foodservice directors related to purchasing from local growers and producers. Cottingham, Hovland, Lenon, Roper, and Techtmann (2000) stressed the importance of being able to provide a dependable supply of quality product if local growers wanted to sell to foodservice operations.

Several limitations are important to recognize when reviewing findings from this study. Most importantly, only 19% of those who were sent a questionnaire chose to complete and return it. Such a limited response reduces the ability to generalize the data. Reasons for such a low response rate are not known. Not having the specific name of the current foodservice director and having to send the questionnaire to a more generic addressee might have impacted the response rate. Requesting information on quantity of food purchases also could have been perceived to be too time consuming for participants to complete.

Another limitation of the study is the use of a sample from only four Midwestern states. Such a sample provided valuable information about perceptions in this region; however, these perceptions may not be representative of other regions in the country.

Data collected in this study reflect perceptions held by the persons completing the questionnaires about the benefits and obstacles to local purchase. Future studies are needed to examine issues such as actual costs involved with purchasing locally grown or produced foods, safety of the local food supply, etc.

CONCLUSIONS AND APPLICATION

According to Tropp and Olowolayemo (2000), linking local growers and producers and school foodservice programs offers concrete benefits to everyone involved in the school foodservice program:

- schoolchildren may have access to a greater volume and variety of fresh fruits and vegetables;
- local school foodservice directors can obtain fresher products packed to better meet their specifications without having to pay for long-distance transportation and handling costs; and
- local growers gain an additional, and generally stable, source of farm-based income.

Results of this study suggest that those responsible for school foodservice operations, and who participated in this study, believe there are benefits to be gained by purchasing from local growers and producers. Such benefits include enhanced public relations, as well as providing economic support for the community.

USDA programs, such as Team Nutrition and the Small Farms/School Meals Initiative, provide innovative ways to help better connect schools with their communities and enhance the quality of meals served in school foodservice. Those purchasing food for school foodservice operations need to be familiar with state and local regulations related to local purchasing.

Several potential obstacles to local purchasing were identified in this study. However, school foodservice buyers could work with their local growers and producers to help overcome these potential obstacles. Talking with growers to gain an understanding of product availability and growing season will help foodservice buyers determine when purchasing locally grown products is feasible. Encouraging local growers and producers to combine their efforts to allow school foodservice ordering and payment to occur through one representative would reduce some current obstacles to local purchasing.

REFERENCES

Azuma, A.M., & Fisher, A. (2001). Healthy farms, healthy kids: Evaluating the barriers and opportunities for farm-to-school programs. (Available from the Community Food Security Coalition, P.O. Box 209, Venice, CA 90294).

Cottingham, J., Hovland, J., Lenon, J., Roper, T., & Techtmann, C. (2000). Direct marketing of farm produce and home goods. University of Wisconsin Extension publication: A3602 [Online]. Available: http://cf.uwex.edu/ces/pubs/pdf/A3602.pdf

Gilman, S. (1999). Direct marketing options: Farmers' markets, restaurants, community-supported agriculture and the organic alternative. Presentation given at the U.S. Department of Agriculture's Agricultural Outlook Forum, Washington, DC [Online]. Available: www.ams.usda.gov/directmarketing/l_online.htm

Gregoire, M.B., Strohbehn, C., Huss, J., Huber, G., Karp, R., & Klein, S. (2000). Local food connections: From farms to schools. ISU Extension PM 1853A. Ames, IA: Iowa State University Extension [Online]. Available: www.extension.iastate.edu/Publications

Jolly, D. (1999). "Home made"--the paradigms and paradoxes of changing consumer preferences: Implications for direct marketing. Presentation given at the U.S. Department of Agriculture's Agricultural Outlook Forum, Washington, DC [Online]. Available: www.ams.usda.gov/directmarketing/l_online.htm

Lucht, J. (1999, August 7). Dismal agricultural economy might spur interest in alternative commodities: Vilsack. *Iowa Farmer Today, 15*(48), 2.

National Restaurant Association (2000). Restaurant spending [Online]. Available: www.restaurant.org/research/spending.html. Chicago, IL: Author.

Sneed, J., & White, K.T. (1993). Development and validation of competency statements for managers in school food service. *School Food Service Research Review, 17*, 50-61.

Strohbehn, C., & Gregoire, M.B. (2001). Innovations in school food purchasing: connecting to local food. *The Journal of Child Nutrition & Management, 25* (2), 62-65.

Tropp, D., & Olowolayemo, S. (2000). How local farmers and school food service buyers are building alliances. Washington, DC: U.S. Department of Agriculture, Agricultural Marketing Service [Online]. Available: www.ams.usda.gov/tmd

U.S. Department of Agriculture, Food and Nutrition Service. (2000). Small Farms/School Meals Initiative: A step-by-step guide on how to bring small farms and local schools together. FNS-316. Washington, DC: Author [Online]. Available: www.fns.usda.gov/con/lunch

BIOGRAPHY

Mary B. Gregoire is professor and chair, Department of Apparel, Educational Studies, and Hospitality Management, Iowa State University, Ames, IA. **Catherine Strohbehn** is adjunct assistant professor, Hotel, Restaurant, and Institution Management Program, Iowa State University, Ames, IA.